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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,848	03/12/2004	Dirk Grundmann	03P04059	6682

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EXAMINER
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SANEI, HANA ASMAT

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<p>Application No.</p> <p align="center">10/798,848</p>	<p>Applicant(s)</p> <p align="center">GRUNDMANN ET AL. </p>	
	<p>Examiner</p> <p align="center">Hana A. Sanei</p>	<p>Art Unit</p> <p align="center">2879</p>	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/12/04</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 7 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The applicant's linear relationship between the cold filling pressure of the xenon (Xe) and the content of zinc iodide,  $Y = -0.015X + 0.207$ , is inadequate and does not comply with the provided graphs (representation of applicant's Fig. 3). The disclosure state that the relationship is satisfied in the pressures of 9000 hPa to 13000 hPa (Page 4, lines 37-38 – Page 5, lines 1-7). However  $Y = -0.015X + 0.207$  is not a working relationship in the ranges of 9000 hPa to 13000 hPa because it yields an output of zinc iodide amount (mg) that is not remotely in the suggested range of 0.10mg or less (Page 4, lines 34-36) and instead yields value less than 0.00 mg (negative range). That applicant's relationship yields an inadequate output with the suggested input of 9000

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hPa to 13000 hPa is improper. Examiner believes applicant intended to recite the working relationship to be  $Y = -(1.5E-5)X + 0.207$  instead of  $Y = -0.015X + 0.207$ .

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Deguchi et al (US 2003/0222584 A1).

With respect to Claim 1, Deguchi teaches a discharge vessel (1c, see at least Fig. 1) which is sealed in a gas-tight manner, and in which are arranged two electrodes (pair of 3) and an ionizable filling for producing a gas discharge, wherein the ionizable filling comprises xenon and halides of the metals sodium, scandium, indium and zinc ([0024-0026] & [0038] where Deguchi's mixture includes a first halide in addition to scandium halide and sodium halide and a second halide and a starting gas as Xe).

With respect to Claim 2, Deguchi teaches that the halides are iodides (InI, ScI<sub>3</sub>, NaI, ZnI<sub>2</sub> [0047] & [0101]).

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With respect to Claim 4, Deguchi teaches that the diameter of the electrodes has a value in the range from 0.27 mm to 0.36 mm and the distance between the electrodes is less than 5 mm ([0061]).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deguchi et al (US 2003/0222584 A1) in view of Tamura et al (US 2005/0093455 A1).

With respect to Claim 3, Deguchi teaches the invention set forth above (see rejection in Claim 1 above) and further teaches that the cold filling pressure of xenon has a value in the range from 9000 hPa to 13000 hPa ([0037]), the content of sodium iodide has a value in the range from 0.15 mg to 0.30 mg, the content of scandium iodide has a value in the range from 0.10 mg to 0.25 mg, the content of zinc iodide has a value of less than or equal to 0.10 mg, and the content of indium iodide has a value of less than or equal to 0.05 mg ([0101]). It should be noted that applicant fails to indicate the lower boundary of the indium iodide; hence Examiner selects a lower boundary of 0.00 mg.

Deguchi lacks a discharge vessel in the specified range. In the same field of endeavor, Tamura teaches that the discharge vessel has a volume of the discharge

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vessel has a value in the range from 23 mm.<sup>3</sup> to 30 mm.<sup>3</sup> ([0018]) in order to improve lamp life ([0015]). It should be noted that since applicant claims only the *amounts/content* of the ionizable fillings and not the *concentration* thereof, Tamura teaches the suitability of adjusting the volume of the discharge vessel. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the discharge vessel volume, as disclosed by Tamura, in the device of Deguchi in order to improve lamp life.

With respect to Claim 5, Deguchi teaches the invention set forth above (see rejection in Claim 1 above) and further teaches an outer bulb (outer envelope, 1) which surrounds the discharge vessel (1c), the discharge vessel ([0056]) is made of silica glass, the thickness or the diameter of the electrodes has a value in the range from 0.27 mm to 0.36 mm ([0101]), the distance between the electrodes is less than 5 mm, the cold filling pressure of xenon has a value in the range from 9000 hPa to 13000 hPa ([0037]), the content of sodium iodide has a value in the range from 0.15 mg to 0.30 mg, the content of scandium iodide has a value in the range from 0.10 mg to 0.25 mg, the content of zinc iodide has a value of less than or equal to 0.10 mg, and the content of indium iodide has a value of less than or equal to 0.05 mg ([0101]). It should be noted that applicant fails to indicate the lower boundary of the indium iodide; hence Examiner selects a lower boundary of 0.00 mg.

Deguchi lacks a discharge vessel in the specified range. In the same field of endeavor, Tamura teaches that the discharge vessel has a volume of the discharge vessel has a value in the range from 23 mm.<sup>3</sup> to 30 mm.<sup>3</sup> ([0018]) in order to

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improve lamp life ([0015]). It should be noted that since applicant claims only the *amounts/content* of the ionizable fillings and not the *concentration* thereof, Tamura teaches the suitability of adjusting the volume of the discharge vessel. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the discharge vessel volume, as disclosed by Tamura, in the device of Deguchi in order to improve lamp life.

With respect to Claim 6, Deguchi teaches that the molar ratio of sodium to scandium has a value in the range from 3 to 6 ([0117]).

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hana A. Sanei whose telephone number is (571) 272-8654. The examiner can normally be reached on Monday- Friday, 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

  
VIP PATEL  
PRIMARY EXAMINER

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner

Hana A. Sanei



1/31/00